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DIRECTORATE OF
INTELLIGENCE

Intelligence Memorandum

Soviet Defense Expenditures, 1963-1972

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CENTRAL INTELLIGENCE AGENCY
Directorate of Intelligence
March 1972

INTELLIGENCE MEMORANDUM

Soviet Defense Expenditures, 1963-1972

Foreword

On 24 November 1971, Soviet Finance Minister Vasiliy F. Garbuzov, in a speech before the Supreme Soviet, announced that planned defense expenditures in 1972 would again be 17.9 billion rubles. This marks the fourth consecutive year of an almost constant level of planned defense spending as announced by the USSR--defense expenditures were planned at 17.7 billion rubles in 1969 and 17.9 billion rubles in 1970 and 1971.

The total amount to be spent for defense announced each year is the only official figure which publicly alludes to the overall Soviet defense effort. It is unclear, however, what portion of military spending--as defined in the US--is included under the Soviet defense budget. Most military research and development and military space programs are believed to be financed by the science budget rather than the defense budget. Expenditures for military aid to other nations or for stockpiling of military commodities also may be covered in part or in total in other budgetary accounts.

For these reasons, the announced defense budget is not a reliable indicator of the total amount of Soviet spending for military-related activities or of overall changes in these activities from year to year.

Note: This memorandum was prepared by the Office of Strategic Research and coordinated within the Directorate of Intelligence.

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To estimate this total and Soviet spending for individual programs, direct costing techniques have been developed.

This memorandum presents estimates of Soviet defense expenditures for the years 1963 through 1972 developed by the Office of Strategic Research and based for the most part on a direct costing methodology. Soviet defense expenditures are reconstructed by costing in detail the *observed* Soviet forces, unit by unit, to provide an appreciation of the economic implications of Soviet military programs.

Ruble expenditures estimated by this method describe the defense effort as it would appear to the Soviet military and economic planners. The *dollar* valuations of the Soviet defense programs provide the US reader with an appreciation of the magnitude of Soviet defense activities and a basis for comparing the defense efforts of the US and the USSR.

This memorandum is the fourth annual publication which uses the Soviet budget announcement as an occasion for reporting on intelligence estimates of Soviet defense spending. This year methodological refinements have made it possible to exclude expenditures for civil space programs from the estimates.

A summary begins on page 5.

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Summary

Soviet expenditures for military purposes grew from an estimated 18 billion rubles (58 billion dollars) in 1963 to about 22 billion rubles (72 billion dollars) in 1971, an increase of about 22 percent.* Except for the first two years, defense spending increased each year during the period, but at varying rates of growth. Spending was relatively constant from 1963 through 1965, increased to an average growth rate of 4 percent during the years 1966-1970, but then grew by only about 1 percent in 1971.

About half of Soviet defense expenditures are for general purpose forces and for command and general support elements--such as logistic, maintenance, communications, transportation, medical, and training units--that cannot be allocated to individual missions. Outlays for these two functions grew slowly but steadily throughout the 1963-1971 period, accounting each year for half of the total. Year-to-year changes in defense spending, however, have been shaped mainly by the Soviet drive to catch up with the US in strategic arms. Much of the rapid growth between 1966 and 1970 resulted from increases in outlays for

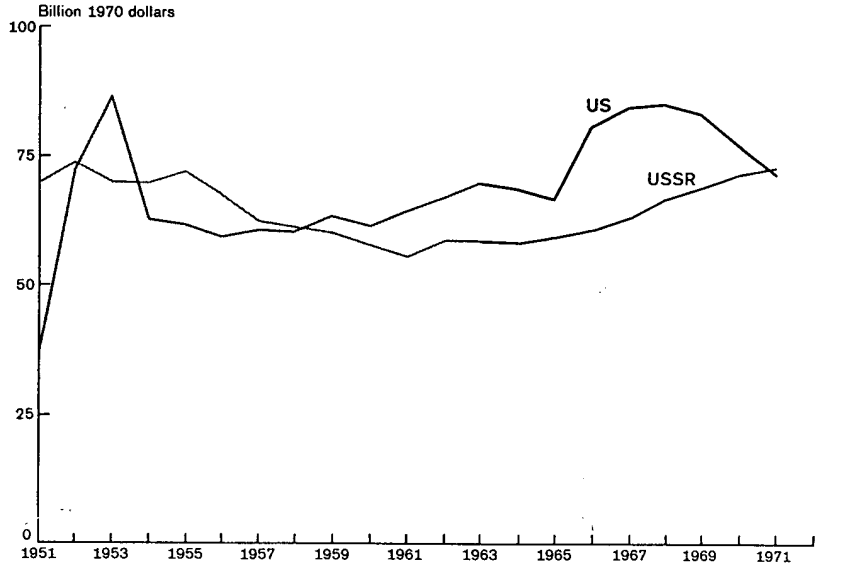
* *The ruble figures are estimates of what the USSR pays for its military forces and programs. The dollar figures are estimates of what the Soviet forces and programs would cost if purchased and operated in the US. The dollar figures are obtained by valuing individual Soviet forces and programs at 1970 US prices. They are not obtained by converting ruble estimates of total spending to dollars with a single ruble-to-dollar ratio. As the mix of resources used by the Soviets changes, the ratio of overall cost expressed in rubles to that expressed in dollars will also change. As a result, a ruble expenditure which equates to a certain dollar expenditure in one year will not necessarily equate to the same dollar expenditure in another year.*

strategic attack, strategic defense, and military RDT&E. A decline in strategic attack expenditures--reflecting a leveling off of ICBM deployment--is primarily responsible for the low growth rate in 1971.

Soviet defense expenditures for 1972 are projected at about 22.5 billion rubles (74 billion dollars), an increase of about 2½ percent over those in 1971. Continued increases in military RDT&E and strategic defense spending offset a projected decline in strategic attack expenditures. Outlays for the other missions are expected to remain near their 1971 levels.

A comparison can be made between Soviet and US defense efforts by estimating the approximate dollar value of Soviet defense programs--that is, by estimating what it would cost to reproduce the Soviet military forces and activities in the US. Such a comparison shows that cumulative US expenditures

Comparison of US Expenditures With Dollar Valuations of USSR Expenditures for Defense, 1951-1971



since 1963 have amounted to about 683 billion dollars, compared with the equivalent of about 575 billion dollars for the Soviets. US defense spending has displayed more fluctuation than has Soviet spending (see facing chart), and with the exception of 1971, the US expenditures for each year exceeded the Soviet effort valued in dollars.

A mission-by-mission comparison between Soviet and US efforts reveals a mixed pattern. The dollar valuation of the Soviet effort for strategic attack is about one-third more than US spending during 1963-1971. A substantial part of Soviet outlays, however, was for peripheral attack forces--for which the US has no exact counterpart. The cumulative Soviet and US spending levels for intercontinental attack forces are about equal. This comparison, however, understates the long-term US effort. US expenditures on forces for intercontinental attack peaked before 1963 and the sizable outlays of the earlier years are thereby excluded. The dollar value of Soviet spending did not reach its peak until 1969.

The Soviet effort for strategic defense has consistently exceeded that of the US. During 1963-1971 Soviet outlays valued in dollars were about three times as great as those of the US, and the gap increased steadily over time. In 1963 the Soviets spent the equivalent of almost 3 billion dollars more than the US for strategic defense and by 1971 the difference was almost 6 billion dollars.

Throughout 1963-1971, US spending for general purpose forces exceeded the dollar valuation of Soviet expenditures for such forces. Even before large-scale commitments of US forces in Vietnam, the US spending effort was about 15 percent higher than that of the USSR. At the height of the Vietnam conflict, US general purpose spending averaged 65 percent above the Soviet level. Since the start of US disengagement in Vietnam, US general purpose force expenditures have been falling and in 1971 exceeded the Soviet spending level measured in dollars by less than 10 percent. A similar pattern exists for command and general support expenditures.

Total US spending for military RDT&E during 1963-1971 was about 25 percent greater than the Soviet effort for the same period. Recent reductions in the US spending for military RDT&E together with continued growth in the Soviet effort have resulted in a dollar valuation of Soviet spending for military RDT&E which has exceeded that of the US for the last two years.

Analysis of the Soviets' ninth five-year economic plan (1971-1975) indicates that the resource situation in the USSR will remain tight over the next four years, thus providing incentive for holding military spending down. The Soviet economy, however, is capable of sustaining--or even accelerating--the present pace of military expenditures if the leaders are willing to pay the price in terms of other objectives. Moreover, institutional forces inherent within the Soviet military and defense industries would argue against any sharp reductions in defense outlays over the next few years.

Soviet military programs for even the near future cannot be confidently predicted with the precision necessary for constructing detailed cost estimates. This is particularly true at the present time because of the uncertain impact of the strategic arms limitation talks on Soviet plans. The following general observations can be made, however.

-- Overall spending for Soviet strategic forces for the next five years could be stabilized at about the 1971 level and still make available sufficient funds to permit a continued upgrading of the forces.

-- Spending for general purpose forces will probably continue a slow but steady growth if present trends in weapon modernization continue and if there is no substantial expansion of manpower levels.

-- Although the rapid growth of the last five years is expected to taper off, military RDT&E probably will continue as the most dynamic element of Soviet military spending unless there is a radical shift in emphasis from military to civilian industrial R&D.

-- The cumulative effect of the above mission trends would cause total spending to increase at a rate of about 3 percent a year in the 1972-1975 period.

* * * * *

Methodology

The estimates of Soviet defense spending contained in this memorandum are developed for the most part on the basis of a detailed listing of Soviet forces. The force components so listed are multiplied by estimates of their unit costs both in rubles and in dollars.* The results are then summed into totals and subtotals, using expenditure categories similar to those used by the US Department of Defense (DoD).

The validity of the estimates of Soviet military spending based on direct costing depends on the reliability of the underlying physical data base and the accuracy of the cost factors applied to that base. The physical data base on forces and weapons reflects the combined collection and analytical efforts of the intelligence community. Available intelligence information has made it possible to develop a comprehensive and highly detailed inventory of the numbers and kinds of weapons and units that make up the Soviet armed forces. This extensive physical data base includes information on such items as deployment levels of Soviet strategic attack, strategic defense, and general purpose forces, production of major weapons and items of equipment, and manning requirements of the forces.

Cost factors are known with less certainty. Information on Soviet costs is good for some types of

** Detailed estimates in rubles and in dollars for the period 1963-1972 are contained in the Statistical Annex. The annex also presents key elements of the underlying forces which were estimated for costing purposes. The ruble figures are estimates of what the USSR pays for its military forces and programs. The dollar figures are estimates of what the Soviet forces and programs would cost if purchased and operated in the US. The dollar figures are obtained by valuing individual Soviet forces and programs at 1970 US prices. They are not obtained by converting ruble estimates of total spending to dollars with a single ruble-to-dollar ratio. As the mix of resources used by the Soviets changes, the ratio of overall cost expressed in rubles to that expressed in dollars will also change. As a result, a ruble expenditure which equates to a certain dollar expenditure in one year will not necessarily equate to the same dollar expenditure in another year.*

spending--notably personnel costs, which account for a substantial share of total spending. Many other cost factors, however, must necessarily be derived from analogous US data and experience. On balance, considering the good evidence and degree of detail available on force levels and weapon programs, and the carefully constructed cost factors, the expenditure levels and trends are believed to be reasonably accurate reflections of the costs of the Soviet military establishment.

The direct costing approach cannot be used to estimate what the Soviets spend for military research, development, testing, and evaluation (RDT&E) because of the lack of a comprehensive data base. The Soviets, however, have published a substantial amount of statistical data and other descriptive literature about their scientific activities, including information on manpower and facilities and some expenditure data. Although there are gaps in the data and the interpretation of the data is subject to uncertainty, the available information does form a basis for RDT&E cost estimates. These estimates correspond in conceptual coverage to the categories of US RDT&E activity funded by the DoD and by the Atomic Energy Commission (AEC).

Estimates of Soviet spending for military RDT&E should be viewed as much more approximate than the estimates of outlays for deployed forces. First, because the basic data come from Soviet publications, the validity of the estimates depends upon the accuracy of Soviet financial accounting and on a correct interpretation of the published information. Moreover, the allocation of a major portion of Soviet RDT&E expenditures between military and civil applications is based largely on published Soviet data concerning developments in the Fifties. Finally, the transition from rubles to dollars and dollars to rubles presents a number of theoretical complexities as well as practical problems.

For the past few years, the USSR has provided less detail than before on its spending for science so that the estimates of military RDT&E expenditures for the current period are particularly uncertain. For 1970 and subsequent years they should be regarded as preliminary and subject to change.

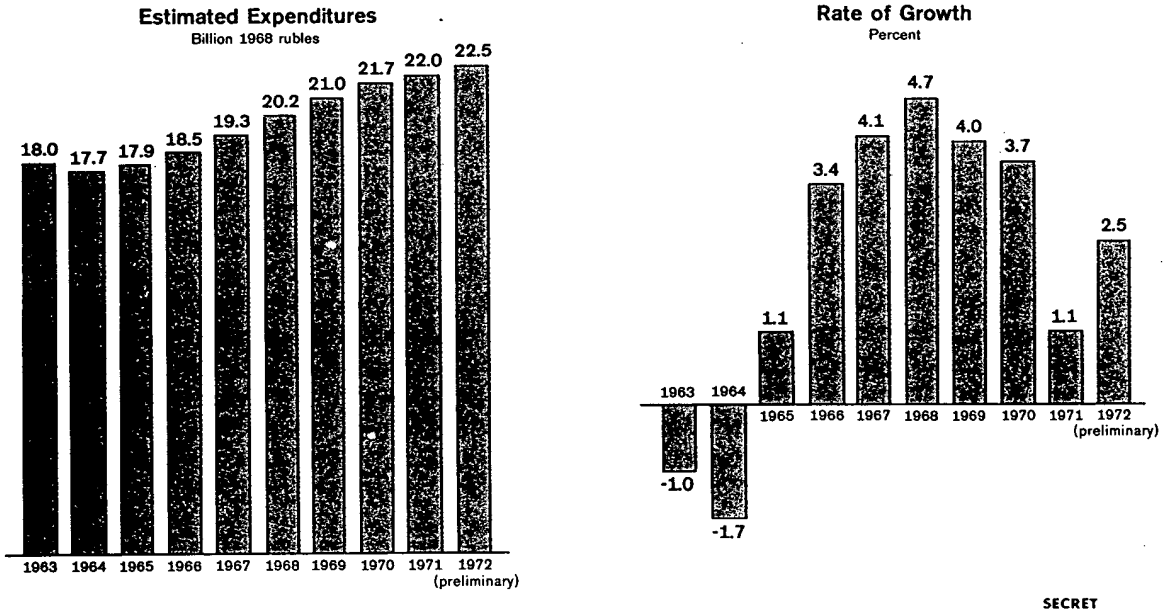
The Soviet View

Expenditure Trends

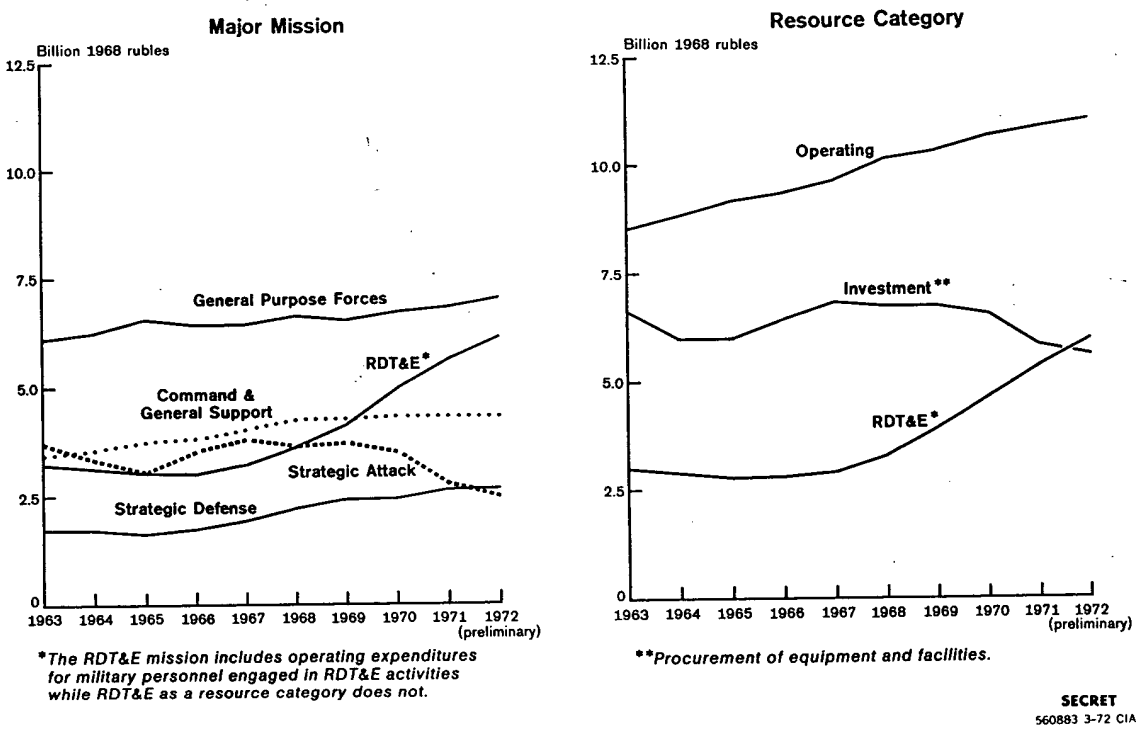
Soviet expenditures for military purposes grew from an estimated 18 billion rubles in 1963 to about 22 billion rubles in 1971, an overall increase of about 22 percent (see chart below). Except for the first two years, defense spending increased each year during the period, but at varying rates of growth. Spending was relatively constant in 1963-1965 and increased at an average annual rate of 4 percent during 1966-1970, but the rate fell to only 1 percent in 1971.

The magnitude of total Soviet defense expenditures is determined to a large extent by expenditures for general purpose forces, and for command and general support elements that cannot be allocated to individual missions (mostly logistic, maintenance, communications, transportation, medical, and training units). Together these two major categories account for half of the total (see facing chart). The pattern of total defense spending, however, has been shaped mainly by an increase in outlays for strategic attack forces in 1966 and 1967, and by moderate growth in spending for strategic defense, together with large annual increases in military RDT&E spending in the

Estimated Soviet Expenditures for Defense, 1963-1972



Estimated Soviet Expenditures for Defense, by Major Mission and Resource Category, 1963-1972



late Sixties. Expenditures for these elements reflect the Soviet drive since the mid-Sixties to catch up with the US in strategic arms. The Soviets devoted considerable resources in this period in building a force to roughly match the US in numbers of intercontinental attack weapons. In the past few years the effort has been shifting to military RDT&E.

During 1963-1971, the years 1966-1970 was the period of most rapid growth of total defense expenditures. In 1971, expenditures increased only slightly as growth in spending for military RDT&E and strategic defense was largely offset by a decline in outlays for strategic attack. Analysis of programs now under way indicates that total spending probably will grow only moderately in 1972.

Moderate growth in Soviet defense expenditures estimated for 1971 and 1972 does not imply a static defense establishment. On the contrary, the present level of Soviet military expenditures--the equivalent of more than 70 billion dollars per year--is large enough to maintain existing force levels and provide

for a steady flow of about 14 billion dollars for new hardware for the weapons inventory.

Considering the relative shares of the resource categories--operating, investment, and RDT&E--required by the defense establishment, there has been a significant shift between investment and RDT&E expenditures (see chart on page 13). In 1963, operating costs accounted for 47 percent of the total resources. Investment spending was a close second, consuming 36 percent, and RDT&E accounted for 17 percent.

Operating costs--which are composed of personnel costs and operation and maintenance expenses--have grown steadily throughout the period and now account for almost 50 percent of total defense outlays. This is a reflection of the increase since 1963 in both the total inventory of weapons and the total number of people in the military establishment. The only major class of weapons to have shown a significant decline in numbers deployed since 1963 has been submarines--falling by some 60 boats. The total military aircraft and the total number of minor naval combatants in the Soviet forces remained at about the same level, but major naval combatants, strategic surface-to-surface missiles and surface-to-air missiles have gone up substantially. Total manpower has increased since 1963 by about 1 million men.

Investment expenditures--which include equipment procurement and construction of military facilities--have declined since 1963 and in 1971 accounted for only 27 percent of the total. Also, unlike operating expenditures, investment outlays have fluctuated over the period. Generally as the procurement of one weapon ends, procurement of another begins. For example, in 1965 there was a relatively low investment in strategic land-based missiles. Purchases of the SS-4 had ended the year before and the SS-5 was at the end of its production run. Procurement of the SS-7 and SS-8 was in progress, but the SS-9 and SS-11 were just entering the inventory. SS-13 procurement had not yet started. In all, some 300 missiles were purchased in 1965. During the peak investment year of 1967, the SS-7 was still being deployed, the SS-9 and SS-11 programs were going strong, and preparations were under way to deploy the SS-13. Over 430 missiles

were added to the inventory in that year. Investment in land-based strategic missiles has declined sharply since 1968 as deployment has leveled off. With SS-9, SS-11, and SS-13 deployment nearing completion, only about 280 missiles were procured in 1971.

Military RDT&E spending has risen rapidly, especially since 1967, and in 1971, with an estimated 24 percent of all Soviet resources devoted to defense, almost equaled the investment share. The shift to RDT&E expenditures apparently reflects a change of emphasis from deployment of large numbers of relatively simple weapons to development of more sophisticated weapons which are deployed in small numbers.

General Purpose Forces and Command and General Support

About half of total Soviet defense spending goes for general purpose forces and for command and general support. With only minor exceptions, expenditures for both of these missions grew at a relatively constant rate throughout the 1963-1971 period and--judging from ongoing developments in the forces--are expected to continue this trend in 1972. Spending for the general purpose forces is the larger of the two, and is the largest single expense item of Soviet defense spending (see chart on page 13). From 1964 through 1969, command and general support was the second largest defense expense, although it has been surpassed since then by military RDT&E outlays.

Within the general purpose forces, ground forces generally account for about 50 percent of total spending for the mission, naval forces for 30 percent, and tactical aviation and military transport aviation for about 10 percent each. The Soviets have added 29 divisions to their ground forces since 1963.* There have been substantial increases in the number of aircraft and major surface combatants in the navy, and smaller percentage increases in the number of tactical aircraft and transport and auxiliary aircraft. The number of minor surface combatants has remained at about the same level since 1963, and the fleet of general purpose submarines has gone down about 25 percent.

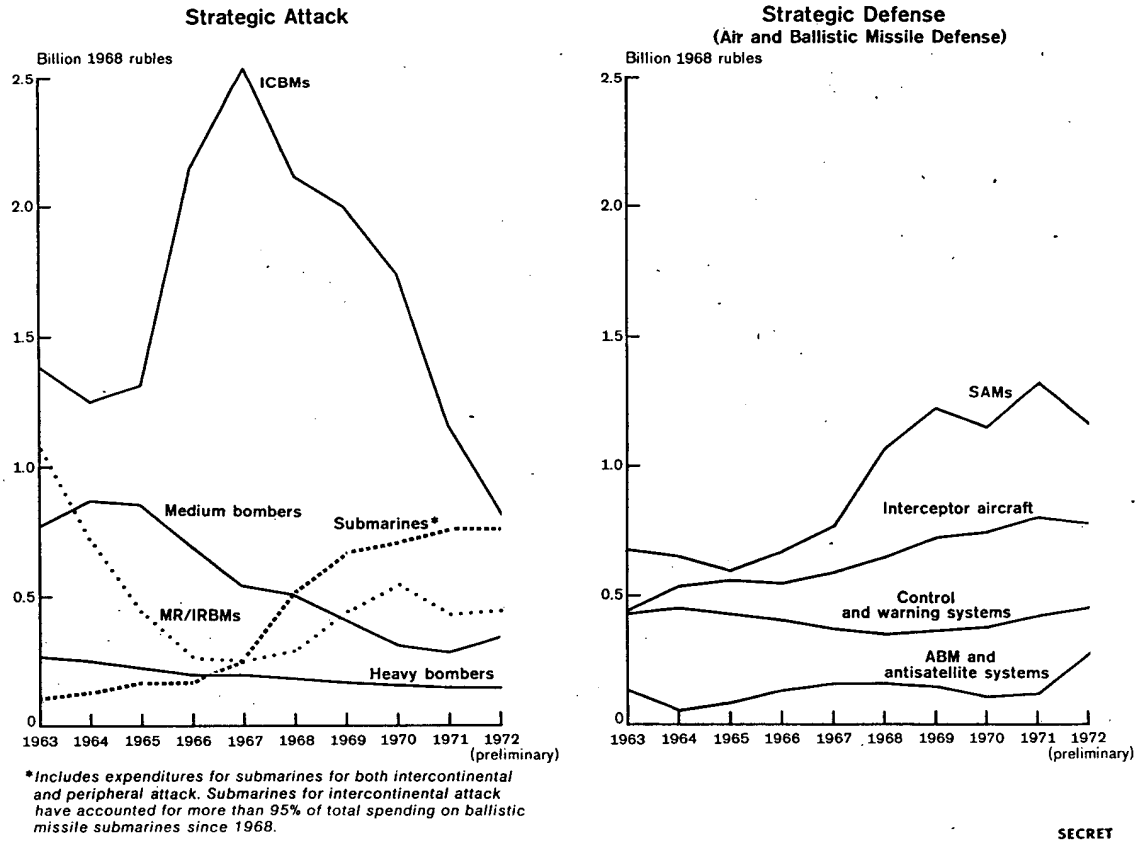
* *Tables 11 and 12 in the Statistical Annex present data on the deployment of Soviet forces and weapon systems since 1963.*

Strategic Forces

Expenditures for strategic forces--offense and defense combined--accounted for almost 30 percent of total defense spending in 1963, but declined to 24 percent in 1971 and are expected to continue to fall in 1972. Spending for strategic forces also has shown a slight absolute decline, falling from an estimated 5.3 billion rubles in 1963 to an expected 5.1 billion rubles in 1972.

Expenditures for intercontinental attack forces increased rapidly in the middle Sixties as the Soviets expanded their ICBM force, and remained high in the late Sixties with deployment of their Y class submarine fleet. Expenditures for the ICBM force, however, have declined sharply since 1968 as deployment has

Estimated Soviet Expenditures for Strategic Attack and Strategic Defense, by Element, 1963-1972



*Includes expenditures for submarines for both intercontinental and peripheral attack. Submarines for intercontinental attack have accounted for more than 95% of total spending on ballistic missile submarines since 1968.

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leveled off (see facing chart). Annual outlays for peripheral attack systems were reduced by more than one-half between 1963 and 1967 and have remained relatively stable since.

The Soviet ICBM force increased from 91 launchers in 1963 to an estimated 1,407 launchers in 1972. The peak growth year was 1967, when the deployed force more than doubled that of the preceding year. Growth of the operational force has tapered off since then. The Y class submarine fleet will have expanded from 1 boat in 1968 to an estimated 30 boats by the end of 1972. In contrast, the Soviet heavy bomber force has declined from a peak of 205 in 1964 to a current level of about 185. In the peripheral force, total launchers at peripheral missile complexes have increased slightly since 1963, but the medium bomber force has been reduced by almost 30 percent and the ballistic missile submarine fleet has been cut in half.

Estimated expenditures for strategic defense forces were relatively stable through 1967, but rose thereafter when the Soviets deployed new surface-to-air missile systems and interceptor aircraft. In 1972 expenditures are expected to stay at about the 1971 level. Spending for ABM deployment as well as for control and warning systems remained relatively constant throughout the period. (See facing chart.)

The number of interceptors in the Soviet air defense system has declined by about 30 percent since 1963, while related expenditures increased by almost 80 percent, reflecting the increasing complexity and cost of modern aircraft. A similar cost growth is evident for SAMs--the number of launchers has increased since 1963 by slightly less than 40 percent, but associated expenditures have increased by over 70 percent, again reflecting the increased sophistication and expense of modern weapons. Deployment of the Soviet ABM system has been limited to the 64 launchers located around Moscow.

Military Research, Development, Testing, and Evaluation

The most dynamic element in Soviet defense spending in recent years has been RDT&E. Although a major expense item through 1967, spending was more or less constant. Since then, expenditures for military RDT&E

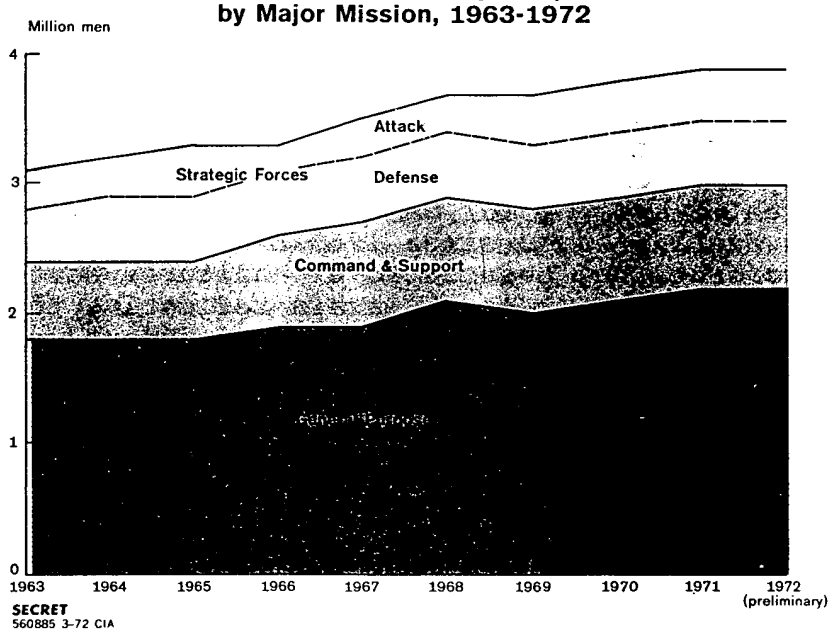
have increased rapidly, rising from about 3 billion rubles in 1967 to an expected level of over 6 billion in 1972. Spending for military RDT&E as a mission surpassed the amount spent for command and general support in 1970, achieving a level second only to that of the general purpose forces. It is expected to retain this position in 1972.

Military Manpower

Total Soviet military manpower increased from about 3 million men in 1963 to almost 4 million in 1971 (see chart below). More than half of this growth was in the general purpose forces--particularly the ground troops element, which increased by nearly 300,000 men primarily as a result of the Sino-Soviet buildup.

Strategic attack forces increased by 150,000 men mainly because of the SS-7, SS-9, and SS-11 programs. Strategic defense manpower increased by 75,000 men as SAM forces were increased and modernized. Command and general support manpower rose by 135,000 men during the period 1963-1971, reflecting a requirement for greater numbers of support personnel for maintenance of more sophisticated weaponry.

Estimated Soviet Military Manpower by Major Mission, 1963-1972



US and USSR Comparisons

The purpose of costing observed and estimated Soviet defense programs in *dollar* terms is to provide an appreciation of the physical size of the program by showing the level of effort--measured in dollars--that would be required to reproduce the Soviet programs *in the US*. In general, the dollar values show what it would cost in the US to purchase and operate the Soviet forces. Dollar values derived in this way provide a basis for comparing US and Soviet programs.

The monetary values developed for the comparisons are expressed in constant 1970 dollar terms. A constant price base is used so that all changes in spending from year to year reflect changes in the forces and programs themselves rather than changes in prices.

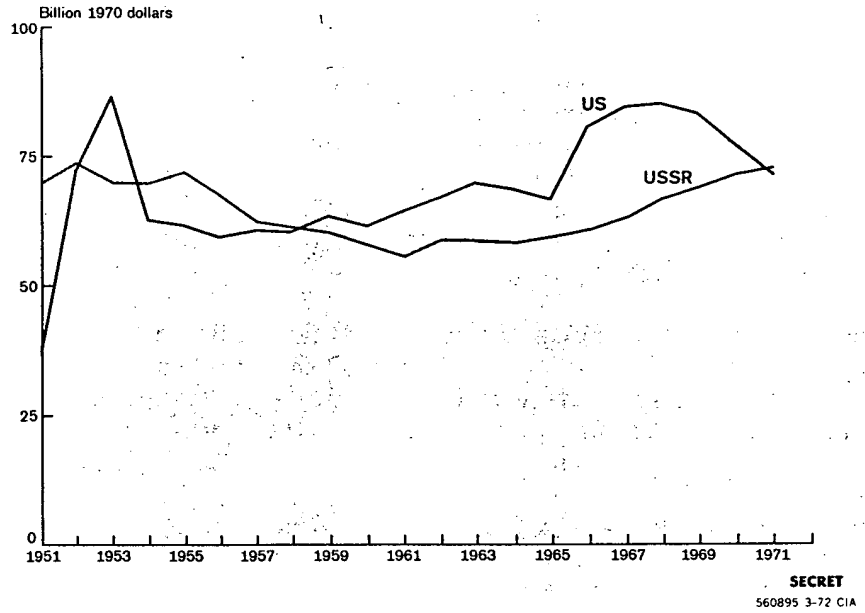
Further, the DoD data used for the US in the comparisons have been adjusted to include AEC spending, to exclude civil defense and military assistance, and to aggregate all RDT&E spending into one account. These adjustments have been made to obtain as much conceptual comparability as possible with the dollar values of Soviet programs.

In reviewing US and Soviet comparisons, it is important to bear in mind that dollar valuations of Soviet programs should be viewed as approximations rather than as precise measures. It is important to note also that the relative levels of effort of the two countries measured in money terms are only rough guides to relative levels of military capabilities. Equal levels of effort for comparable programs do not necessarily result in equal force effectiveness.

Total Spending

Spending for defense by the US was consistently higher in the Sixties than the dollar valuations of Soviet spending, but the trends in the total defense effort for the two countries have differed significantly. The chart on page 20 shows the trends since 1951. The years 1951-1962 are included to provide a background for the period discussed in this section, 1963-1971.

Comparison of US Expenditures With Dollar Valuations of USSR Expenditures for Defense, 1951-1971



US expenditures declined slightly in 1964 and 1965, increased sharply in 1966 and 1967 during the Vietnam buildup, and remained near the 1967 level through 1969. Since 1969 they have tapered off, and US outlays in 1971 fell below the estimate of the dollar value of the Soviet effort. In contrast, Soviet expenditures have demonstrated a steady upward trend for most of the period since 1961. Cumulatively, the US spent 683 billion dollars on defense during the period 1963-1971, while the Soviets spent the equivalent of about 575 billion dollars, or around 85 percent of US spending.

Strategic Attack

The USSR spent approximately one-third more in dollar terms for strategic attack during 1963-1971 than the US did--although US expenditures in the five years preceding this period greatly exceeded those of the Soviets. The Soviets spent only about two-thirds of their strategic attack expenditures on intercontinental attack systems. The remaining

one-third was spent on peripheral attack forces--MRBMs, IRBMs, medium bombers, and ballistic missile submarines--whose mission is largely confined to targets along the periphery of the USSR. The US has no exact counterpart of these peripheral attack weapon systems, so all of its strategic attack spending went to intercontinental attack forces (see chart on page 22).

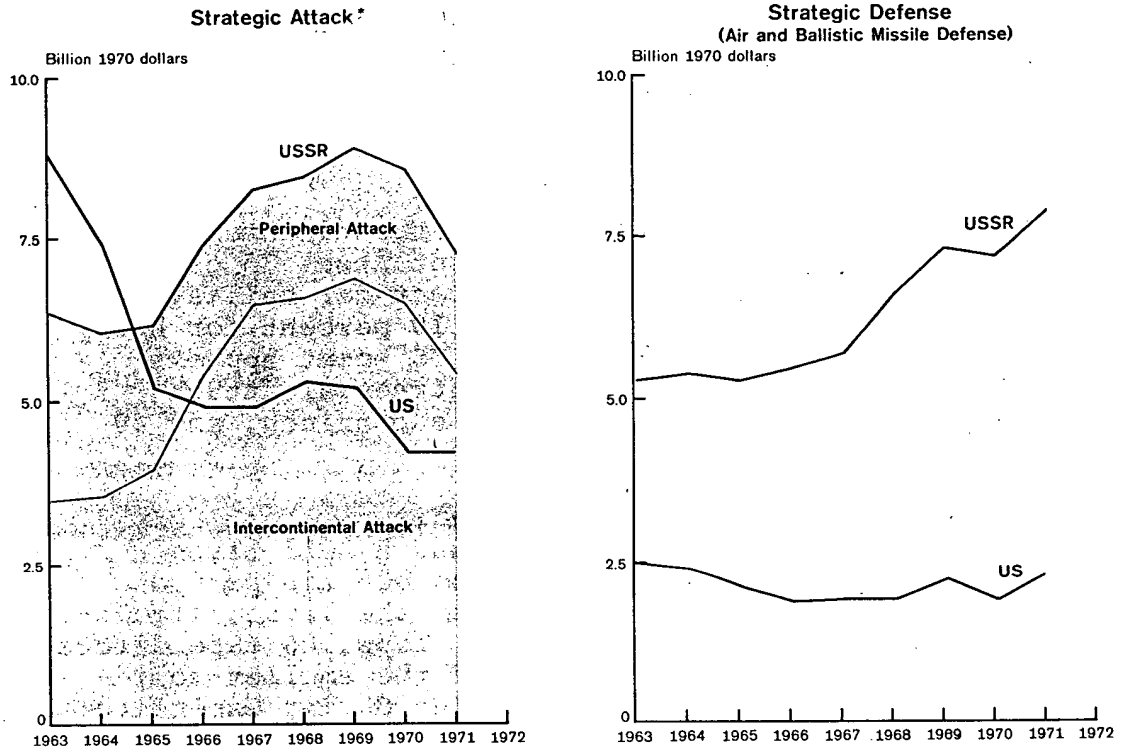
Of their expenditures for intercontinental attack during 1963-1971, the Soviets spent about 75 percent on ICBMs. More than 15 percent went for ballistic missile submarines and less than 10 percent for heavy bombers. During this period the US spent approximately 30 percent of its intercontinental attack budget for ICBMs, 30 percent for submarines, and 40 percent for heavy bombers.

In dollar terms, Soviet expenditures for ICBMs during 1963-1971 were about two and a half times those of the US. At the beginning of this period the US had already deployed all of the large, liquid-fueled Atlas and Titan missiles. Thus, US expenditures largely reflect the deployment of the smaller solid-fueled Minuteman. In contrast, the Soviet expenditures reflect the deployment of a sizable number of large liquid-fueled SS-9s as well as the entire SS-11 force.

The US was the heavier investor in ballistic missile submarines, spending about one-third more than the dollar cost of Soviet programs during 1963-1971. Soviet expenditures on submarine ballistic missile systems, however, increased rapidly in the late Sixties with the deployment of the Y class submarine. The Soviet effort measured in dollars exceeded that of the US by about 40 percent for the years 1969 through 1971.

The US has maintained and improved a large intercontinental bomber force throughout the period. In contrast, the Soviet bomber force has remained small, and little qualitative improvement has been made in it over the years. As a result, the US spent almost five times as much for intercontinental bombers as did the USSR during 1963-1971.

Comparison of US Expenditures With Dollar Valuations of USSR Expenditures for Strategic Attack and Strategic Defense, 1963-1971



*All US spending is for intercontinental systems.

Note: These comparisons exclude the cost of nuclear warheads and bombs.

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When comparing outlays for strategic offensive forces, the timing of programs is particularly important. For example, large-scale deployment of intercontinental missile systems in the US preceded such deployment in the USSR by several years. In the early Sixties, US spending for Atlas, Titan, Minuteman, and Polaris systems led to high investment outlays. Soviet counterparts to these systems were in early stages of development at the time. In the middle of the decade, as US expenditures declined and ICBM and submarine deployment increased in the USSR, the dollar valuations of total Soviet strategic

attack expenditures surpassed those of the US. The dollar valuation of Soviet spending for intercontinental attack surpassed US spending in 1966 and has exceeded the US level every year since.

Strategic Defense

Soviet expenditures for strategic defense valued in dollars were nearly three times those of the US for the years 1963-1971 (see facing chart). The difference was even greater for air defense systems--SAMs and fighter-interceptors--where the dollar valuations of Soviet spending were over eight times US expenditures. The greater emphasis on air defense by the USSR reflects, among other things, the greater bomber threat to Soviet territory than to that of the US.

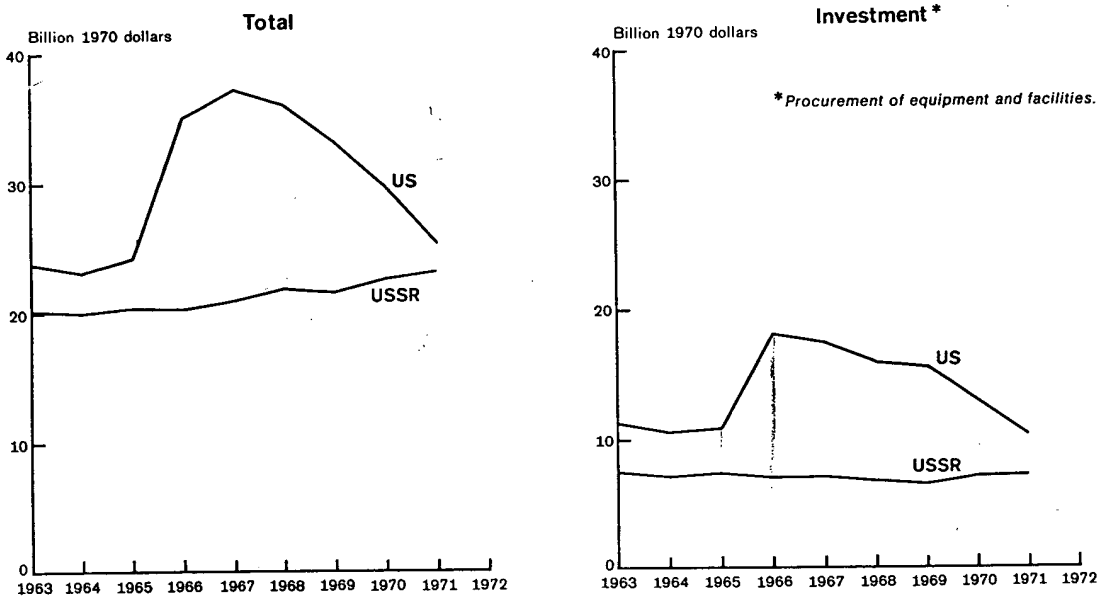
Equivalent dollar costs of Soviet expenditures for both ABMs and control and warning were slightly less than those of the US for the period 1963-1971 as a whole. The Soviet effort on ABM systems declined relatively during the period--from about 8 percent of total strategic defense spending in 1963 to about 4 percent in 1971. In contrast, US spending for ABMs started in 1968 and by 1971 had grown to almost half of the US strategic defense budget.

General Purpose Forces

Throughout 1963-1971, the US spent more on general purpose forces than did the Soviets (see upper charts on page 24). Before its large-scale commitment in Vietnam, expenditures by the US on general purpose forces averaged about 15 percent above the dollar valuation of counterpart Soviet spending. During the height of the Vietnam conflict--1966-1969--US spending exceeded that of the USSR by about 65 percent. The percentage difference was even greater in terms of investment (that is, procurement and construction) outlays.

In 1970 and 1971 US expenditures for general purpose forces declined appreciably with the reduction in the Vietnam effort, and in 1971 US spending for

Comparision of US Expenditures With Dollar Valuations of USSR Expenditures for General Purpose Forces, 1963-1971



Note: These comparisons exclude the cost of nuclear warheads and bombs.

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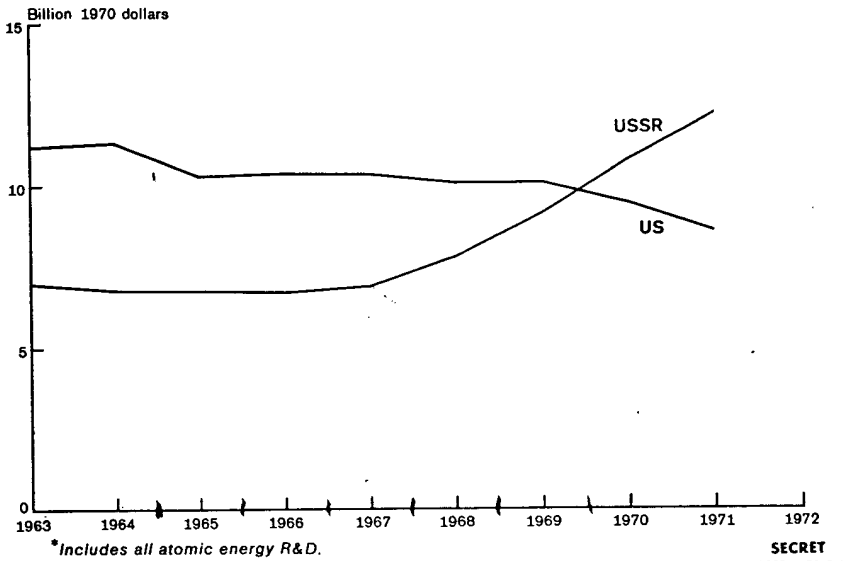
Comparison of US Expenditures With Dollar Valuations of USSR Expenditures for Military RDT&E*, 1963-1971



*Includes all atomic energy R&D.

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general purpose forces exceeded the dollar valuation of Soviet expenditures by less than 10 percent. A similar comparison pattern exists for command and general support.

Military Research, Development, Testing, and Evaluation

Total US spending during 1963-1971 for military RDT&E was about 25 percent more than Soviet spending in dollar terms for the same period.* Recent reductions in US spending on military RDT&E together with continued growth in the Soviet effort have resulted in dollar values of Soviet spending that have been higher than the US levels since 1969 (see facing chart).

* *As noted earlier, the Soviet outlays for military RDT&E are estimated in the aggregate and conceptually include all outlays for nuclear energy R&D programs. To obtain comparability, US data include all DoD expenditures for RDT&E and all AEC expenditures for R&D. See page 11 for a discussion of the validity of estimates of Soviet RDT&E expenditures.*

The Economic Setting

The USSR has the second largest economy in the world. Measured in terms of gross national product, the overall magnitude of the Soviet economy has grown to a point where it is more than half that of the US.

The structure of production in the two economies, however, is quite different. The USSR is unique among industrialized countries in having a highly developed industrial sector side by side with a backward agricultural sector and a relatively primitive trade and service network. This imbalance stems from an overriding priority long given to rapid economic growth and defense, calling for the development of heavy industry, particularly producer and military goods, at the expense of agriculture and goods and services for the population.

The Soviet economy also differs from that of the US in that all of the major resource allocation decisions are made at the center. Each year the Soviet leaders must make very specific decisions about how the available resources will be allotted to claimants for consumer satisfaction, for economic growth, and for defense and space programs. Two of the principal Soviet objectives--military strength and economic growth--compete for the same resources. The leadership must consider the fact that military strength is obtained in part at the expense of economic growth and, therefore, that large military programs today could reduce the amount of resources available in the future.

The Burden of Defense Programs

One common measure of the burden of defense spending upon a national economy is the size of these expenditures relative to GNP. When valued in ruble prices, the 1971 defense share of GNP in the USSR is about 6 percent. This is slightly less than the share of GNP that the US devoted to comparable programs.

The lopsided development of the USSR's economy has caused an apparent anomaly that arises when the economic burden of its military effort is viewed this way. Given that US GNP is about twice as large as Soviet GNP, it would appear logical to expect that Soviet defense programs must be about one-half the size of US programs. Actually, the USSR supports defense programs about as large as those of the US. This does not mean that the USSR is more efficient than the US in the production of military goods and services. In fact, in most areas of military production the USSR is less efficient.

The apparent paradox results rather from differences in the price structures of the two economies. The Soviet economy is essentially a dual economy, consisting of a modern and efficient industrial sector alongside backward agricultural and consumer-oriented sectors. Because of these wide disparities in efficiency, the costs of military output are low relative to costs in the backward sectors. As a result of the differences in costs between the military and other sectors of the Soviet economy, military expenditures tend to appear as a smaller portion of the Soviet GNP than they would be if the efficiencies in the various sectors of the economy were more alike.

Military Programs--The Competition for Resources

A further appreciation of the burden of military spending can be gained by considering it in the context of opportunity costs--that is, the alternative uses that the Soviet leaders might like to make of the capacity devoted to the defense effort. Military production and RDT&E are particularly competitive for the resources needed to foster and sustain economic growth, still a priority objective of the Soviet leadership. It is clear that the military competition with the West has impeded economic growth in the USSR. This theme has been repeated over and over again in the public statements of Soviet leaders.

Defense spending affects Soviet industry by diverting a large share of the capacity for the production of machinery and equipment from civilian to military programs. Over the past decade defense

needs siphoned off about one-third of all machinery and equipment produced in the USSR. For the most part the capacity devoted to the production of military equipment is among the most modern production capacity available in the Soviet economy.

More important from the standpoint of economic growth, however, is the fact that the defense effort preempts a large share of the finest scientific, engineering, and managerial talents of the economy--assets needed to bolster productivity in the civilian sector. For example, about half of the total Soviet R&D effort is claimed by defense and about a fifth by the space program at a time when the Soviet leaders are trying desperately to speed up the introduction of new technology in the economy.

The Five-Year Plan

Analysis of the USSR's ninth five-year plan (1971-1975), ratified at the November 1971 session of the Supreme Soviet, indicates that the competition between the military and civilian sectors for resources will remain sharp over the next four years. The plan calls for continued high rates of growth in capital investment, but additions to the labor force during this plan period are to be only three-fourths the number added in the previous one (1966-1970). This means that the success of the plan will depend upon a substantial increase in labor productivity which, in turn, will require a step-up in the rate of technology innovation in industry.

Whether such an increase in labor productivity can be realized is questionable. A relaxation of the military burden could be of benefit, insofar as it frees high-quality physical and human resources for the modernization of the economy. The fundamental problem facing the Soviets, however, is implementation of effective managerial reform--better planning and better incentives--to facilitate the adoption of improved technology in the civilian economy. Despite the efforts launched by Brezhnev and Kosygin in 1965, prospects for fundamental reorganization of the management of the economy remain dim.

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Outlook for 1972-1975

The level of future Soviet defense spending will depend in part upon the results of the ongoing strategic arms limitation talks (SALT). The tight resource situation in the Soviet economy will undoubtedly provide incentives for holding spending down. On the other hand, institutional forces inherent within the Soviet military and defense industries probably preclude any sharp reductions in defense outlays over the next few years. Moreover, the Soviet economy is capable of sustaining--or even accelerating--the present pace of the military buildup if the leaders are willing to pay the price in terms of other objectives.

Strategic Forces

The decline in spending for strategic attack forces, reflecting the completion of the large ICBM deployment programs begun in the mid-Sixties, probably will be halted if the new ICBM and bomber systems currently under development are deployed in significant numbers. If this occurs--and construction of Y class ballistic missile submarines continues--strategic attack expenditures could rise above the present level by 1974 or 1975.

Under a SALT agreement limiting the numbers of intercontinental delivery vehicles, the upgrading of existing systems would still probably prevent significant cuts in expenditures for strategic forces. The new programs would, however, probably be less costly than the original ICBM buildup and the level of spending for strategic attack systems probably would remain well below the peak spending of the late Sixties.

Spending for strategic defense appears to have peaked in 1971 and is expected to remain the same in 1972 and taper off slightly in 1973 even in the absence of a SALT agreement. The major ongoing air defense deployment programs--SAMs and interceptor aircraft--will be near completion by then. If a

SALT agreement is not reached, the beginning of an ABM deployment program in 1974 or 1975 could drive spending above the 1971 level.

In brief, under a SALT agreement overall spending for strategic forces probably would be stabilized at about the 1971 level. This level, however, is still sufficient to permit a continued qualitative upgrading of the forces. In the absence of a SALT agreement, strategic attack expenditures might rise again in 1973 and 1974 as new deployment programs get under way.

General Purpose Forces

Spending for general purpose forces is expected to increase at a rate of about 2 percent per year over the next four years. This is somewhat higher than the average rate of the previous five years, reflecting the likelihood of a step-up in programs for the modernization of all elements of these forces, continued expansion of the ground forces deployed opposite China, and an increase in the deployment of naval aircraft.

Military Research, Development, Testing, and Evaluation

The fastest growing component of the Soviets' military spending is military RDT&E, which is estimated to have increased at an average annual rate of about 13 percent for the past five years. The figures announced for the new Soviet five-year plan imply that total science expenditures will continue to grow at or near the high rates of the Sixties. How these increases will be split between military and civilian purposes is difficult to determine. There is obvious concern within the Soviet Union for the general state of industrial technology.

Priorities may be shifting, and development of industrial technology may get an increasing share at the expense of development of new weapons systems. Moreover, wage inflation in the science sector is expected to continue and, as a result, real growth in science expenditures will probably be less than

that implied by the Soviet five-year plan. These considerations notwithstanding, military RDT&E expenditures are expected to continue to increase over the next five years, although the rate of growth probably will taper off from the high levels of the last five years.

Total Defense Spending

The net effect of the above projections is that Soviet defense spending will probably continue to grow in the 1972-1975 period even with a SALT agreement. If anticipated trends are correct, outlays for the forces probably will grow an average of 1 to 2 percent per year, or roughly the same average rate as during the previous five-year period. Counting the expected trends in spending for military RDT&E, total expenditures for defense probably will increase on the order of 3 percent per year.

* * * *

Statistical Annex

The expenditure data in this annex are based upon a detailed single-valued statement of the Soviet forces which was specified solely for costing purposes. Key elements of the forces used for costing are shown *in summary form* in Tables 11 and 12. The expenditure data in the tables are expressed in billions to two decimal places. This level of detail is desirable in order to take account of small variations in the underlying physical data. The uncertainties are such, however, that no other significance should be attached to the second decimal place.

The expenditure estimates do *not* include outlays for Soviet civil space programs as in past intelligence reports. Available intelligence information has now made it possible to differentiate between civil and military space programs. In accordance with US Department of Defense practice, estimated expenditures for Soviet military space programs are included under the category command and general support.

Dollar values for Soviet programs are expressed in constant *1970* dollars.

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Table 1
Estimated Soviet Defense Expenditures, by Mission
1963-1972

Billion 1968 Rubles

	1963	1964	1965	1966	1967	1968	1969	1970	1971	*1972**
Major missions	11.39	11.09	11.17	11.65	12.11	12.43	12.58	12.57	12.13	*12.07*
Strategic attack	3.65	3.25	3.03	3.52	3.82	3.64	3.68	3.47	2.70	*2.45*
Strategic defense	1.65	1.66	1.64	1.73	1.86	2.21	2.44	2.37	2.63	*2.63*
General purpose	6.08	6.18	6.50	6.41	6.44	6.58	6.46	6.73	6.80	*6.99*
Command and general support	3.43	3.53	3.69	3.81	4.00	4.17	4.24	4.28	4.29	*4.33*
RDT&E	3.20	3.09	3.03	3.03	3.15	3.57	4.15	4.89	5.55	*6.14*
Total	18.02	17.71	17.90	18.50	19.26	20.17	20.97	21.74	21.98	*22.53*

Note: The expenditures shown for major missions and command and general support include all outlays for personnel and other operating costs, procurement of all hardware (including nuclear warheads), and construction of facilities. They do not include any expenditures for RDT&E. Because of rounding, components may not add to the totals shown.

** Preliminary.*

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Table 2

Dollar Valuation of Estimated Soviet Defense Expenditures, by Mission
1963-1972

Billion 1970 Dollars

	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972*	1973
Major missions	33.64	33.27	33.69	34.90	36.51	38.40	38.91	39.46	39.26	39.50	
Strategic attack	7.58	7.09	6.96	8.10	9.02	9.08	9.37	9.04	7.61	7.24	
Strategic defense	5.28	5.41	5.38	5.56	5.84	6.68	7.33	7.29	8.01	8.00	
General purpose	20.78	20.77	21.34	21.24	21.65	22.64	22.21	23.13	23.64	24.26	
Command and general support	17.30	17.83	18.41	18.75	19.44	20.07	20.53	20.76	20.78	20.86	
RDT&E	7.03	6.78	6.66	6.66	6.92	7.84	9.12	10.77	12.23	13.52	
Total	57.97	57.88	58.76	60.31 70.10	62.87 72.36	66.30 75.95	68.56 76.92	70.98 79.11	72.27 79.30	73.87 80.11	81.87

Note: These dollar valuations are designed to indicate the general size of the Soviet forces and programs by showing what they would cost if purchased and operated in the US. For a description of the activities covered by these data see the note to Table 1. Because of rounding, components may not add to the totals shown.

* *Preliminary.*

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Table 3

Estimated Soviet Defense Expenditures, by Resource Category
1963-1972

Billion 1968 Rubles

	1963	1964	1965	1966	1967	1968	1969	1970	1971	*1972**
RDT&E**	2.99	2.88	2.81	2.80	2.91	3.33	3.91	4.65	5.31	*5.89*
Investment expenditures	6.55	6.01	6.00	6.44	6.77	6.71	6.73	6.52	5.85	*5.62*
Procurement	5.97	5.62	5.65	5.92	6.22	6.22	6.21	6.06	5.51	*5.30*
Land armaments	0.14	0.15	0.15	0.17	0.20	0.21	0.21	0.20	0.18	*0.14*
Ammunition	0.18	0.18	0.19	0.19	0.20	0.20	0.20	0.18	0.17	*0.17*
Naval ships and boats	0.63	0.58	0.64	0.58	0.67	0.71	0.77	0.86	0.92	*1.00*
Aircraft	0.80	0.85	0.88	0.78	0.81	0.82	0.77	0.84	0.90	*0.99*
Missile systems	1.88	1.48	1.47	2.04	2.38	2.45	2.55	2.32	1.83	*1.55*
Electronic equipment	0.33	0.31	0.29	0.29	0.27	0.28	0.30	0.34	0.39	*0.43*
Nuclear weapons	1.39	1.45	1.39	1.21	1.03	0.83	0.68	0.58	0.35	*0.26*
Other	0.61	0.63	0.64	0.65	0.67	0.73	0.72	0.73	0.75	*0.77*
Facilities	0.58	0.39	0.36	0.52	0.55	0.48	0.52	0.46	0.34	*0.32*
Operating expenditures	8.47	8.81	9.08	9.26	9.59	10.13	10.33	10.57	10.82	*11.01*
Personnel	4.94	5.07	5.17	5.27	5.43	5.73	5.77	5.87	6.00	*6.09*
Operation and maintenance	3.53	3.75	3.91	3.99	4.15	4.41	4.57	4.70	4.82	*4.92*
Total	18.02	17.71	17.90	18.50	19.26	20.17	20.97	21.74	21.98	*22.53*

Note: Because of rounding, components may not add to the totals shown.
**Preliminary.*
***Excludes expenditures relating to military personnel on active duty who are engaged in RDT&E, which are included under operating expenditures.*

Table 4

Dollar Valuation of Estimated Soviet Defense Expenditures, by Resource Category
1963-1972

Billion 1970 Dollars

	1963	1964	1965	1966	1967	1968	1969	1970	1971	*1972**
RDT&E**	6.62	6.37	6.23	6.20	6.44	7.36	8.64	10.28	11.75	*13.04*
Investment expenditures	14.36	13.12	13.28	14.31	15.40	15.60	15.90	15.70	14.62	*14.31*
Procurement	13.05	12.24	12.48	13.15	14.18	14.53	14.73	14.68	13.86	*13.60*
Land armaments	0.49	0.51	0.51	0.58	0.68	0.73	0.71	0.68	0.62	*0.48*
Ammunition	0.63	0.65	0.67	0.68	0.69	0.69	0.70	0.65	0.62	*0.61*
Naval ships and boats	2.26	2.07	2.29	2.09	2.38	2.54	2.76	3.08	3.30	*3.57*
Aircraft	2.25	2.38	2.48	2.20	2.27	2.29	2.16	2.36	2.54	*2.79*
Missile systems	4.06	3.21	3.19	4.40	5.12	5.29	5.52	5.05	4.02	*3.40*
Electronic equipment	0.58	0.55	0.51	0.51	0.48	0.51	0.56	0.62	0.71	*0.76*
Nuclear weapons	1.39	1.45	1.39	1.21	1.03	0.83	0.68	0.58	0.35	*0.26*
Other	1.39	1.42	1.45	1.48	1.53	1.65	1.63	1.66	1.70	*1.74*
Facilities	1.31	0.88	0.80	1.15	1.22	1.08	1.17	1.02	0.76	*0.71*
Operating expenditures	36.99	38.39	39.25	39.80	41.04	43.34	44.02	44.99	45.90	*46.52*
Personnel	23.76	24.43	24.82	25.21	25.96	27.59	27.61	28.15	28.80	*29.20*
Operation and maintenance	13.22	13.96	14.43	14.59	15.08	15.75	16.41	16.84	17.11	*17.31*
Total	57.97	57.88	58.76	60.31	62.87	66.30	68.56	70.98	72.27	*73.87*

Note: These dollar valuations are designed to indicate the general level of the Soviet military effort by showing the magnitude of the resources required if purchased in the US. Because of rounding, components may not add to the totals shown.

* *Preliminary.*

** *Excludes the dollar valuations of expenditures relating to military personnel on active duty who are engaged in RDT&E, which are included under operating expenditures.*

Table 5

Estimated Soviet Expenditures for Strategic Attack Forces, by Element
1963-1972

Billion 1968 Rubles

	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972*
Intercontinental attack	1.72	1.59	1.67	2.49	2.95	2.78	2.79	2.56	1.93	1.58
LRA heavy bombers	0.26	0.25	0.22	0.19	0.19	0.18	0.16	0.15	0.14	0.14
Ballistic missile submarines**	0.07	0.10	0.14	0.15	0.23	0.49	0.65	0.68	0.64	0.62
ICBMs	1.38	1.24	1.31	2.14	2.53	2.11	1.99	1.74	1.15	0.82
Peripheral attack	1.87	1.61	1.31	0.98	0.81	0.80	0.84	0.86	0.72	0.81
LRA medium bombers	0.76	0.86	0.85	0.69	0.54	0.50	0.40	0.31	0.28	0.34
MRBMs and IRBMs	1.08	0.72	0.44	0.27	0.25	0.28	0.43	0.53	0.43	0.44
Ballistic missile submarines**	0.03	0.03	0.03	0.02	0.02	0.02	0.01	0.02	0.01	0.03
Joint support	0.06	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Total	3.65	3.25	3.03	3.52	3.82	3.64	3.68	3.47	2.70	2.45

Note: The expenditures for strategic attack forces include all outlays for personnel and other operating costs, procurement of all hardware (including nuclear warheads), and construction of facilities for long-range attack weapon systems. This mission encompasses surface-to-surface missiles with a range of 600 nautical miles and more, ballistic missile submarine systems, and all heavy and medium bombers and tankers assigned to Long Range Aviation. No expenditures for RDT&E are included. Because of rounding, components may not add to the totals shown.

** Preliminary.*

*** Allocation of expenditures for ballistic missile submarines between intercontinental and peripheral attack forces is in accordance with NIE 11-8-71,* Soviet Forces for Intercontinental Attack.

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Table 6

Dollar Valuation of Estimated Soviet Expenditures for Strategic Attack Forces, by Element
1963-1972

	Billion 1970 Dollars									
	1963	1964	1965	1966	1967	1968	1969	1970	1971	*1972**
Intercontinental attack	3.69	3.71	4.06	5.68	6.81	6.87	7.08	6.72	5.57	*4.96*
LRA heavy bombers	0.53	0.52	0.48	0.46	0.45	0.44	0.41	0.39	0.38	*0.37*
Ballistic missile submarines**	0.17	0.22	0.32	0.36	0.70	1.40	1.82	1.92	1.88	*1.91*
ICBMs	2.99	2.97	3.26	4.86	5.67	5.02	4.85	4.40	3.30	*2.68*
Peripheral attack	3.78	3.27	2.81	2.32	2.11	2.12	2.19	2.23	1.95	*2.19*
LRA medium bombers	1.37	1.50	1.51	1.32	1.15	1.09	0.88	0.72	0.67	*0.87*
MRBMs and IRBMs	2.33	1.70	1.22	0.95	0.91	0.98	1.27	1.46	1.25	*1.24*
Ballistic missile submarines**	0.08	0.08	0.08	0.05	0.05	0.05	0.05	0.06	0.04	*0.08*
Joint support	0.11	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	*0.09*
Total	7.58	7.09	6.96	8.10	9.02	9.08	9.37	9.04	7.61	*7.24*

Note: These dollar valuations are designed to indicate the general size of the Soviet strategic attack forces by showing what they would cost if purchased and operated in the US. For a description of the activities covered by these data see the note to Table 5. Because of rounding, components may not add to the totals shown.

* *Preliminary.*

** *Allocation of expenditures for ballistic missile submarines between intercontinental and peripheral attack forces is in accordance with NIE 11-8-71,* Soviet Forces for Intercontinental Attack.

Table 7

Estimated Soviet Expenditures for Strategic Defense Forces, by Element
1963-1972

Billion 1968 Rubles

	1963	1964	1965	1966	1967	1968	1969	1970	1971	*1972**
Control and warning systems	0.42	0.44	0.42	0.40	0.36	0.34	0.36	0.37	0.41	*0.44*
Interceptor aircraft	0.43	0.53	0.55	0.54	0.58	0.64	0.71	0.74	0.79	*0.77*
SAMs	0.67	0.64	0.59	0.66	0.76	1.06	1.21	1.14	1.31	*1.15*
ABM systems	0.13	0.05	0.08	0.12	0.15	0.15	0.14	0.10	0.11	*0.26*
Antisatellite systems	Negl.	Negl.	0.01	0.01	0.01	0.01	0.01	0.01	0.01	*0.01*
Total	1.65	1.66	1.64	1.73	1.86	2.21	2.44	2.37	2.63	*2.63*

Note: The expenditures for strategic defense forces include all outlays for personnel and other operating costs, procurement of all hardware (including nuclear warheads), and construction of facilities for systems assigned to the defense of the USSR against air, missile, and space attack, except the antisubmarine warfare forces, which are included in naval expenditures. This mission encompasses the control and warning network and all SAMs, ABMs, antisatellite systems, and aircraft assigned to PVO Strany (Air Defense of the Homeland). No expenditures for RDT&E are included. Because of rounding, components may not add to the totals shown.

** Preliminary.*

Table 8

Dollar Valuation of Estimated Soviet Expenditures for Strategic Defense Forces, by Element
1963-1972

	Billion 1970 Dollars									
	1963	1964	1965	1966	1967	1968	1969	1970	1971	*1972**
Control and warning systems	1.06	1.10	1.06	1.03	0.95	0.91	0.92	0.95	1.01	*1.06*
Interceptor aircraft	1.42	1.70	1.72	1.68	1.80	1.96	2.16	2.24	2.36	*2.29*
SAMs	2.53	2.49	2.42	2.57	2.76	3.48	3.92	3.83	4.32	*4.03*
ABM systems	0.27	0.10	0.16	0.26	0.29	0.29	0.30	0.24	0.29	*0.59*
Antisatellite systems	Negl.	0.01	0.02	0.02	0.03	0.03	0.04	0.03	0.03	*0.03*
Total	5.28	5.41	5.38	5.56	5.84	6.68	7.33	7.29	8.01	*8.00*

Note: These dollar valuations are designed to indicate the general size of the Soviet strategic defense forces by showing what they would cost if purchased and operated in the US. For a description of the activities covered by these data see the note to Table 7. Because of rounding, components may not add to the totals shown.

** Preliminary.*

Table 9

Estimated Soviet Expenditures for General Purpose Forces, by Element
1963-1972

Billion 1968 Rubles

	1963	1964	1965	1966	1967	1968	1969	1970	1971	*1972**
Ground forces	2.76	2.89	3.10	3.16	3.21	3.45	3.29	3.38	3.28	*3.39*
Tactical air forces	0.68	0.74	0.75	0.68	0.65	0.59	0.60	0.70	0.75	*0.74*
Military transport aviation	0.75	0.67	0.65	0.60	0.59	0.59	0.60	0.64	0.69	*0.76*
Naval forces	1.90	1.87	1.99	1.96	1.99	1.95	1.98	2.01	2.07	*2.10*
Total	6.08	6.18	6.50	6.41	6.44	6.58	6.46	6.73	6.80	*6.99*

Note: The expenditures for general purpose forces include all outlays for personnel and other operating costs, procurement of all hardware (including nuclear warheads), and construction of facilities for systems assigned to Soviet ground, tactical air, military air transport, and naval forces. No expenditures for RDT&E or ballistic missile submarines (which have a strategic mission) are included. Because of rounding, components may not add to the totals shown.

** Preliminary.*

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Table 10

Dollar Valuation of Estimated Soviet Expenditures for General Purpose Forces, by Element
1963-1972

Billion 1970 Dollars

	1963	1964	1965	1966	1967	1968	1969	1970	1971	*1972**
Ground forces	10.13	10.36	10.65	10.94	11.30	12.54	11.96	12.32	12.31	*12.65*
Tactical air forces	1.93	2.05	2.08	1.94	1.90	1.79	1.81	2.09	2.22	*2.16*
Military transport aviation	2.25	2.03	1.96	1.81	1.78	1.79	1.81	1.94	2.08	*2.28*
Naval forces	6.47	6.33	6.66	6.56	6.67	6.52	6.63	6.78	7.03	*7.18*
Total	20.78	20.77	21.34	21.24	21.65	22.64	22.21	23.13	23.64	*24.26*

Note: These dollar valuations are designed to indicate the general size of Soviet general purpose forces by showing what they would cost if purchased and operated in the US. For a description of the activities covered by these data see the note to Table 9. Because of rounding, components may not add to the totals shown.

** Preliminary.*

Table 11

Numbers of Soviet Ground Force Units and Selected Items of Equipment for General Purpose Forces

Midyear 1963-1972

	1963	1964	1965	1966	1967	1968	1969	1970	1971	*1972**
	Units									
Ground forces										
Combat ready divisions	38	38	38	38	38	56	42	44	43	*44*
Reduced strength divisions	61	63	65	65	64	49	65	65	68	*73*
Developing divisions	0	1	4	8	16	21	18	20	19	*19*
Cadre divisions	36	37	36	38	35	32	34	32	32	*28*
Total divisions	135	139	143	149	153	158	159	161	162	*164*
Naval forces										
Aircraft	675	740	755	790	800	870	910	955	985	*1,010*
Major surface combatants**	204	205	208	216	231	236	243	245	251	*257*
Minor surface combatants	1,350	1,340	1,340	1,325	1,300	1,280	1,260	1,230	1,210	*1,180*
General purpose submarines	361	340	350	336	337	328	328	307	287	*279*
Tactical aircraft***	3,275	3,355	3,340	3,500	3,635	3,775	4,025	4,070	3,950	*3,875*
Transport and auxiliary aircraft****	5,100	4,950	4,775	4,650	4,600	4,750	4,830	4,960	5,180	*5,355*

Note: These single-value estimates have been developed from the appropriate NIEs for costing purposes. Although they fall within the ranges of likely alternative force structures presented in the NIEs, they do not necessarily match any particular force.

* *Preliminary*

** *Includes ships in reserve.*

*** *Includes reconnaissance aircraft.*

**** *Includes both fixed-wing aircraft and helicopters.*

Table 12

Deployment of Major Soviet Strategic Weapon Systems

Midyear 1963-1972

Strategic attack	1963	1964	1965	1966	1967	1968	1969	1970	1971	*1972**
Intercontinental										
LRA heavy bombers**	200	205	205	200	200	200	200	195	195	*185*
Ballistic missile submarines***	9	9	9	19	20	21	25	31	40	*47*
Missile launch tubes	27	27	27	57	60	76	153	262	393	*531*
ICBM launchers	91	191	224	250	570	858	1,028	1,242	1,375	*1,407*
Peripheral										
LRA medium bombers	930	850	800	760	740	735	730	725	710	*675*
Ballistic missile submarines***	29	29	29	19	19	18	17	15	14	*14*
Missile launch tubes	81	81	81	51	51	51	46	42	39	*41*
MBRM and IRBM launchers****	659	690	709	693	677	673	653	683	714	*707*
Strategic defense										
Interceptor aircraft	4,370	4,135	3,760	3,570	3,450	3,365	3,365	3,310	3,190	*3,070*
SAM launchers	7,960	8,310	8,400	8,490	8,520	8,660	9,220	9,650	9,910	*10,090*
ABM launchers (Moscow)	-	-	-	-	-	24	48	64	64	*64*

Note: These single-value estimates have been developed from the appropriate NIEs for costing purposes. Although they fall within the ranges of likely alternative force structures presented in the NIEs, they do not necessarily match any particular force.

* *Preliminary*

** *Includes 50 Bison bombers converted to tankers.*

*** *Ballistic missile submarines are divided between intercontinental and peripheral attack in accordance with NIE 11-8-71,* Soviet Forces for Intercontinental Attack.

**** *Includes SS-11s deployed at peripheral missile complexes.*